

# Dock-HW

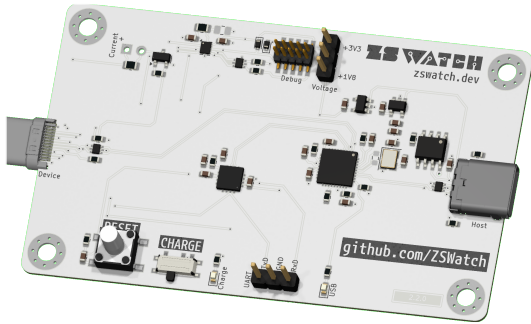
Variant: RELEASED

2025-09-07

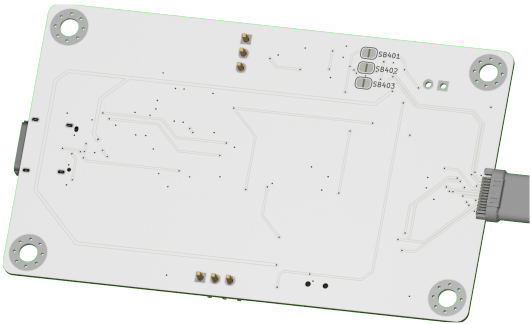
Rev 2.2.0

Page	Index	Page	Index	Page	Index	Page	Index
1	Cover Page	11	.....	21	.....	31	.....
2	Block Diagram	12	.....	22	.....	32	.....
3	Project Architecture	13	.....	23	.....	33	.....
4	Main	14	.....	24	.....	34	.....
5	Revision History	15	.....	25	.....	35	.....
6	.....	16	.....	26	.....	36	.....
7	.....	17	.....	27	.....	37	.....
8	.....	18	.....	28	.....	38	.....
9	.....	19	.....	29	.....	39	.....
10	.....	20	.....	30	.....	40	.....

## TOP VIEW



## BOTTOM VIEW



## NOTES

Comment

Not fitted components are marked as **X**

DRAFT - Very early stage of schematic, ignore details.

PRELIMINARY - Close to final schematic.

CHECKED - There shouldn't be any mistakes. Contact the engineer if you find any.

RELEASED - A board with this schematic has been sent to production.

Date: 07-Sep-2025

## DESIGN CONSIDERATIONS

DESIGN NOTE:  
Example text for  
informational design  
notes.

DESIGN NOTE:  
Example text for  
debug notes.

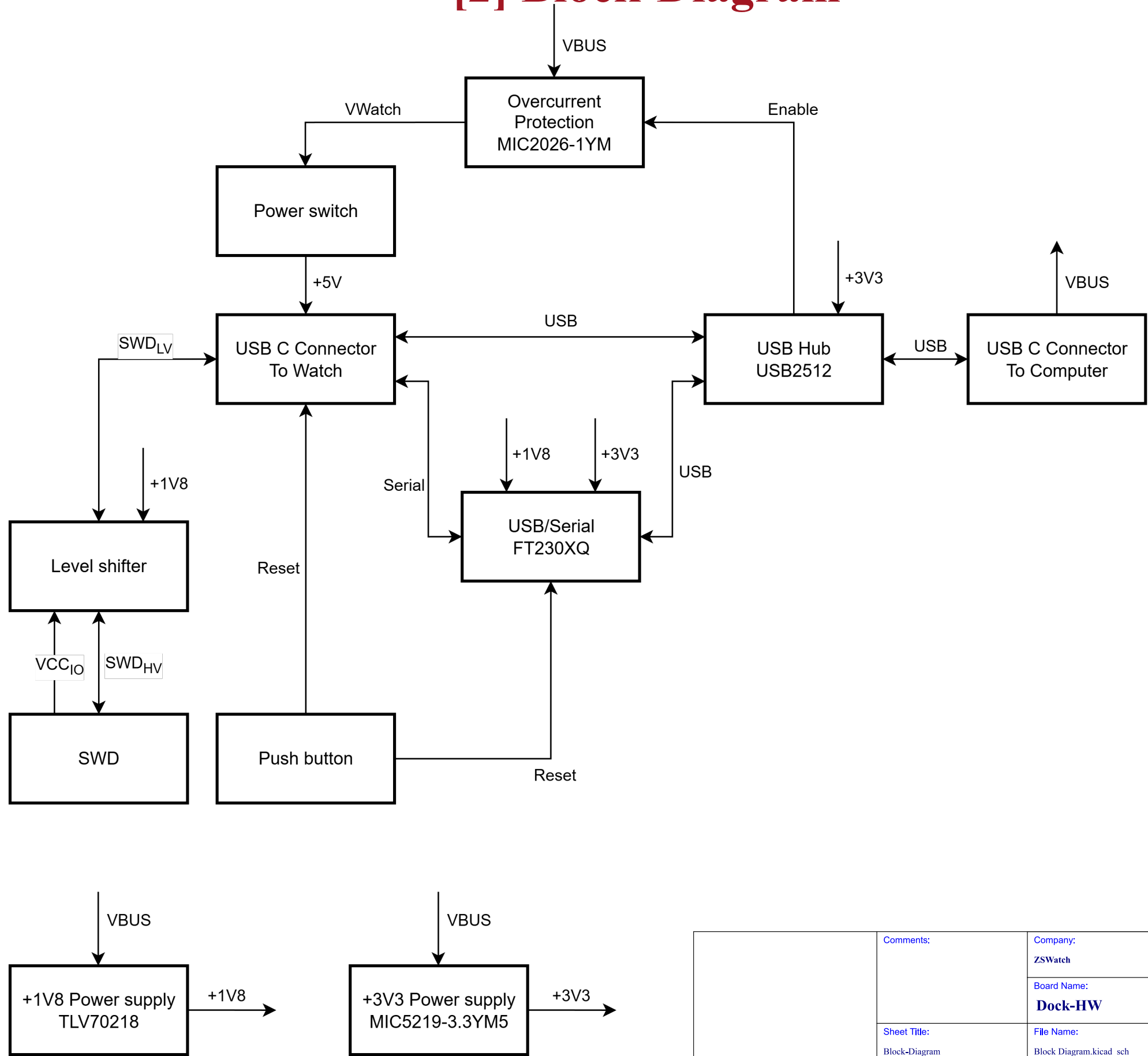
DESIGN NOTE:  
Example text for  
cautionary design  
notes.

DESIGN NOTE:  
Example text for  
critical design  
notes.

LAYOUT NOTE:  
Example text for  
critical layout  
guidelines.

	Comments:	Company: ZSWatch		Variant: RELEASED	Git Hash: 410ce08
		Board Name: Dock-HW		Project Name: ZSWatch Dock	
	Sheet Title: Dock-DevKit	File Name: ZSWatch-Dock.kicad_sch	Designer: Daniel Kampert	Date: 2025-07-13	Revision: 2.2.0
	Sheet Path: /		Reviewer:	Size: A3	Sheet: 1 of 5

[2] Block-Diagram



Target specifications:	
Input voltage:	+5 V
Spec 2	??
Spec 3	??
Spec 4	??

	Comments:	Company: ZSWatch		Variant: RELEASED	Git Hash: 410ce08
	Sheet Title: Block-Diagram	Board Name: Dock-HW		Project Name: ZSWatch Dock	
	Sheet Path: /Block Diagram/	File Name: Block Diagram.kicad_sch	Designer: Daniel Kampert	Date: 2025-07-13	Revision: 2.2.0
				Size: A3	Sheet: 2 of 5



# [5] Revision-History

Version 2.2.0 - 2025-09-07

- Fixed
- Fix inverted Charge-Switch (#51)
  - Flip Rx and Tx lines for USB UART (#48)
  - Fix wrong reset button (#45)
  - Fix wrong pin header for SWD (#44)

- Added
- Add new KiCad template (#42)
  - Add 22R series resistors for SWD lines (#52)
  - Add 0R resistors (NA) to bridge the level shifter (#54)

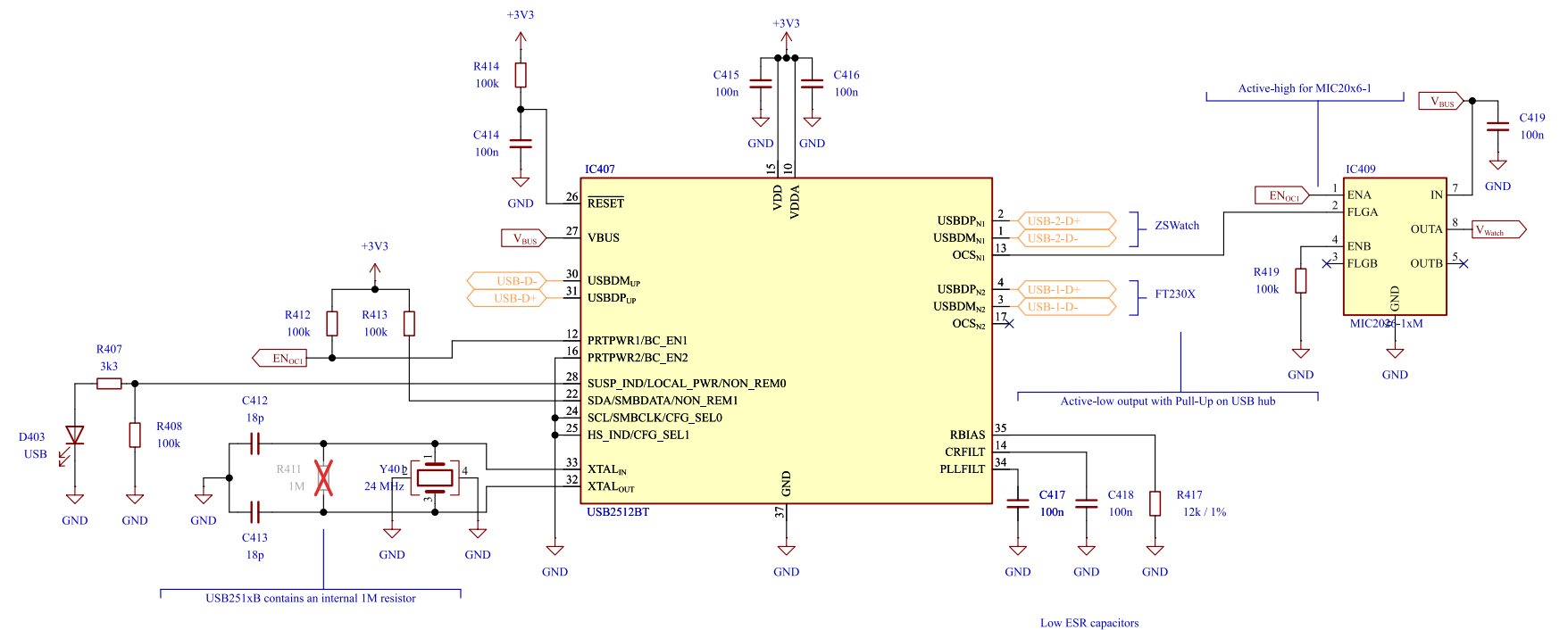
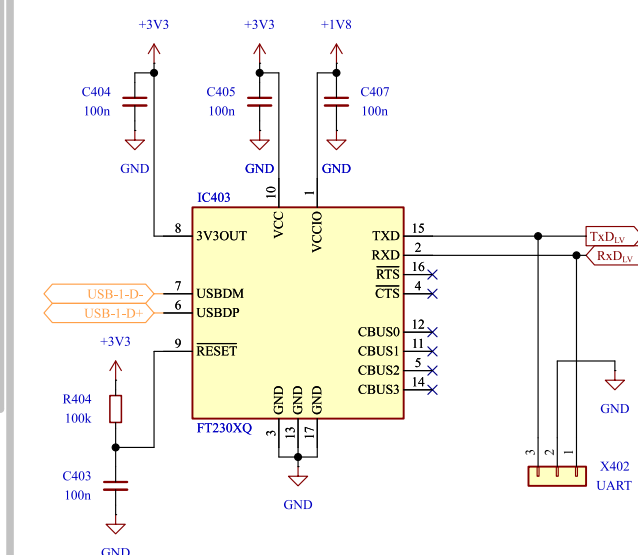
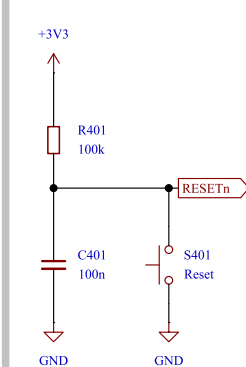
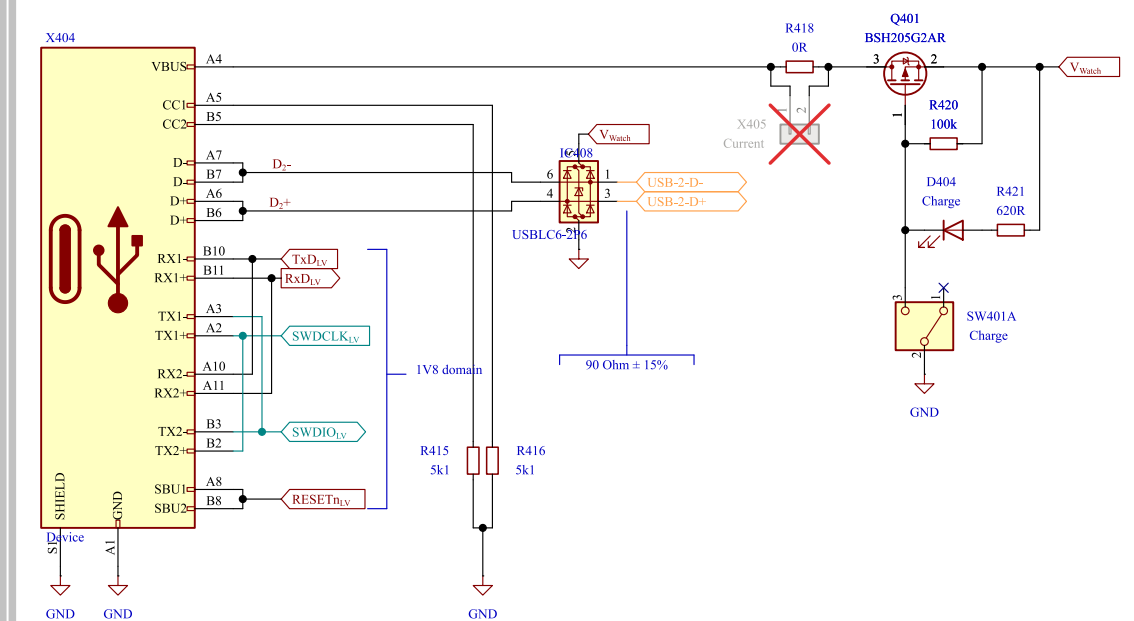
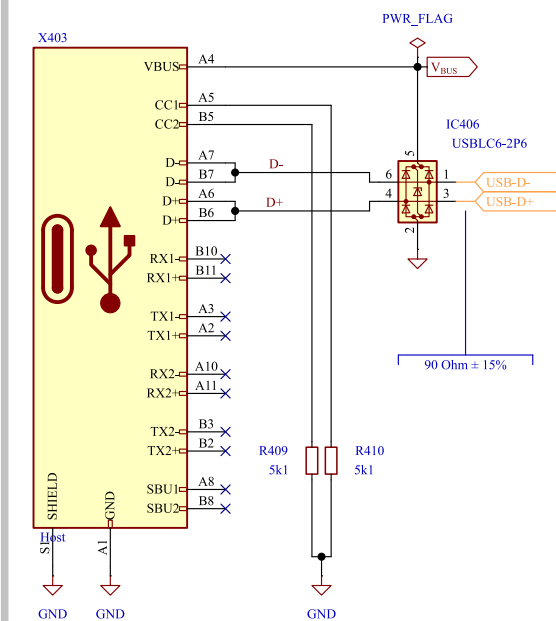
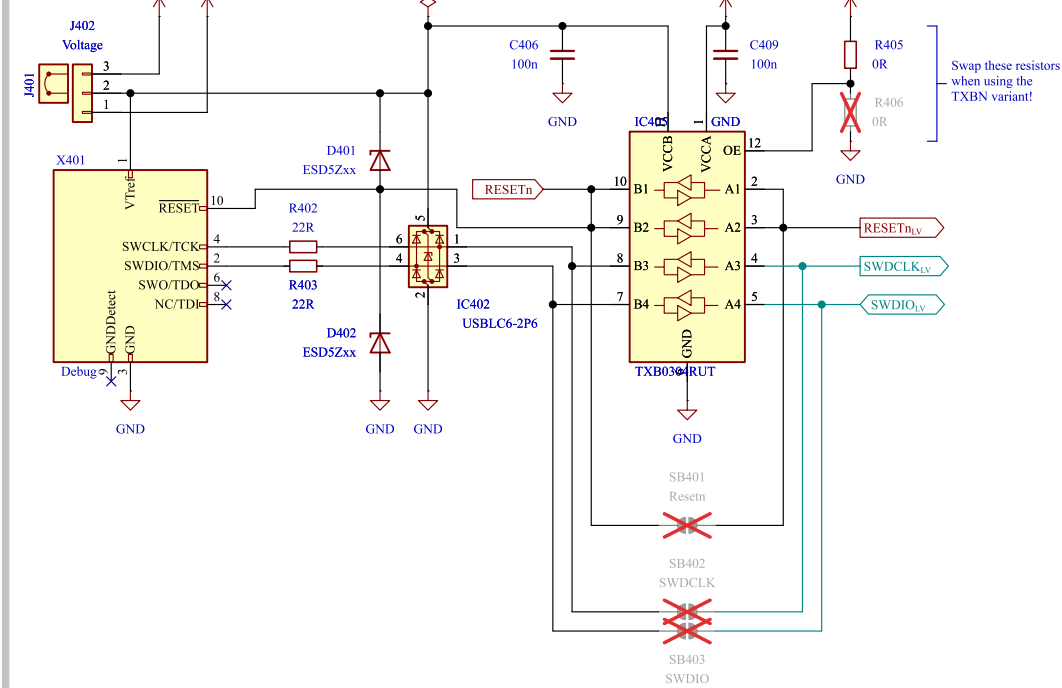
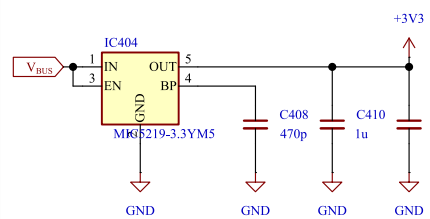
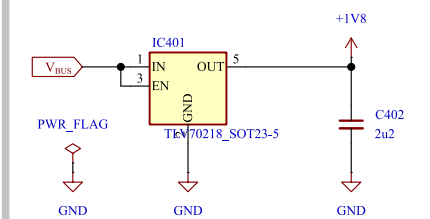
- Changed
- Replace USB connector with edge mounted female USB (#61)
  - Replace level shifter with TXB0102 (#59)
  - Change silkscreen to white (#60)
  - Replace the USB LED with a darker one (#58)
  - Replace ESD diodes with USBLC6-2P6 (#50)

\$(RELEASE\_TITLE\_...)  
\$(RELEASE\_BODY\_...)

\$(RELEASE\_TITLE\_...)  
\$(RELEASE\_BODY\_...)

\$(RELEASE\_TITLE\_...)  
\$(RELEASE\_BODY\_...)

	Comments:	Company: ZSWatch		Variant: RELEASED	Git Hash: 410ee08
		Board Name: Dock-HW		Project Name: ZSWatch Dock	
	Sheet Title: Revision-History	File Name: Revision History.kicad_sch	Designer: Daniel Kampert	Date: 2025-07-13	Revision: 2.2.0
	Sheet Path: /Revision History/		Reviewer:	Size: A4	Sheet: 5 of 5



Hub configuration:

- All ports are non-removable (REM0 = low and REM1 = high)
- LED is active low (REM0 = low and REM1 = high)
- Strap options enabled (CFG\_SEL0 and CFG\_SEL1 = low)
- Self-powered operation enabled (CFG\_SEL0 and CFG\_SEL1 = low)
- Individual power switching enabled (CFG\_SEL0 and CFG\_SEL1 = low)
- Individual over-current sensing enabled (CFG\_SEL0 and CFG\_SEL1 = low)
- Enable battery option for port w (BC\_EN2 = high)

Comments:	Company: <b>ZSWatch</b>		Variant: RELEASED	Git Hash: 410ee08
	Board Name: <b>Dock-HW</b>		Project Name: <b>ZSWatch Dock</b>	
Sheet Title: ZSWatch Dock v2	File Name: Main.kicad_sch	Designer: Daniel Kampert	Date: 2025-07-13	Revision: 2.2.0
Sheet Path: /Project Architecture/Main/		Reviewer:	Size: <b>A3</b>	Sheet: <b>4</b> of <b>5</b>